

**REMARKS**

Claims 1, 3-17 and 20-22 are pending in this application. By this Amendment, claims 1 and 22 are amended. Support for amended claim 1 can be found, for example, on page 9, lines 6-10 of the specification. Support for amended claim 22 can be found, for example, on page 8, lines 5-9 of the specification and in Fig. 1. Thus, no new matter is added. In view of at least the following remarks, reconsideration and allowance are respectfully requested.

Applicants note with appreciation the allowance of claims 16, 17, 20 and 21.

**I. Rejection of Claim 22 Under 35 U.S.C. §112, First Paragraph**

Claim 22 is rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. This rejection is respectfully traversed.

The Office Action asserts that the recitation "hydrogen that is exhausted is not electrochemically reacted with said oxygen," in claim 22, is not accurate. However, Applicants request that the rejection be withdrawn as this claimed feature has been canceled. Further, Applicants submit that the newly recited claimed features comply with the written description requirement of §112, first paragraph, as page 8, lines 5-9 of the specification and Fig. 1 provide sufficient disclosure for the newly recited claimed features. Accordingly, withdrawal of the rejection is respectfully requested.

**II. Rejection of Claim 22 Under 35 U.S.C. §112, Second Paragraph**

Claim 22 is rejected under 35 U.S.C. §112, second paragraph as being indefinite. This rejection is respectfully traversed.

The Office Action asserts that it is unclear how the hydrogen that is exhausted from the cell is not electrochemically reacted with oxygen. However, as discussed above, Applicants have amended claim 22 by canceling this claimed feature and amending claim 22 to more clearly define Applicants' invention. Withdrawal of the rejection is respectfully requested.

**III. Rejection of Claims 1, 4, 6-15 and 22 Under 35 U.S.C. §102(b)**

Claims 1, 4, 6-15 and 22 are rejected under 35 U.S.C. §102(b) over JP 2002-164065 (JP '065). This rejection is respectfully traversed.

In the Response to Arguments section of the Office Action, the Examiner relies on the case law of *In re Casey*, *In re Danly* and *Ex Parte Masham* as grounds for rejecting independent claim 1 under 35 U.S.C. §102(b) over JP '065. Applicants submit that the Office Action's application of *In re Casey*, *In re Danly* and *Ex Parte Masham* is improper.

Applicants note that claim 1 is directed to a fuel cell control system (emphasis added). Importantly, because claim 1 is directed to a control system, it is not enough that the applied reference simply discloses a control system. It is well settled that the structure of a computer, controller, or control system, is defined by its function. Thus, the applied reference must disclose the specific control functions in order to anticipate the claim. Accordingly, for the reasons discussed below, the rejection of claim 1 under 35 U.S.C. §102(b) over JP '065 is improper.

JP '065 fails to disclose all of the features recited in claim 1. In particular, JP '065 does not disclose "wherein said fuel cell control system calculates the average voltage based on the output voltage of each individual cell measured by the output voltage measuring means and a standard deviation of the output voltages of said individual cells," and "wherein said fuel cell control system so controls that the amount of water in said fuel cell stack is increased when the average voltage exceeds a predetermined voltage and the standard deviation is within a predetermined range, and so controls that the amount of hydrogen supply to said fuel cell stack is increased when the average voltage exceeds the predetermined voltage and the standard deviation is out of the predetermined range," as recited in claim 1.

The Office Action, on page 4, asserts that claim 1 of JP '065 discloses a fuel cell control system that diagnoses the fuel cell stack on the basis of the average and standard

deviation of the measured output voltages. It appears that the Examiner is relying on lines 5-10 of claim 1 for disclosing these features. However, as discussed below, this interpretation is incorrect.

The English language translation of claim 1, lines 5-7 of JP '065 recites "the fuel cell with which relative humidity is characterized by having investigated the distribution of voltage for every cell which said electrical-potential-difference detection means detected." It appears that the Examiner is interpreting the term "investigated" to include an average and standard deviation of the measured output voltages. However, nowhere is it disclosed in JP '065 that the term investigated includes "an average and standard deviation of the measured output voltages."

In this respect, claim 1 of JP '065 only discloses a fuel cell control system that includes an electrical-potential-difference detection means that detects or examines the output voltage of each individual cell of the fuel cell stack. Thus, JP '065 does not disclose "wherein said fuel cell control system calculates the average voltage based on the output voltage of each individual cell measured by the output voltage measuring means and a standard deviation of the output voltages of said individual cells," as recited in claim 1.

Furthermore, because JP '065 does not disclose the feature of claim 1 as discussed above, JP '065 also does not disclose "wherein said fuel cell control system causes the amount of water in said fuel cell stack to increase when the average voltage exceeds a predetermined voltage and the standard deviation is within a predetermined range, and causes the amount of hydrogen supplied to said fuel cell stack to increase when the average voltage exceeds a predetermined voltage the standard deviation is out of the predetermined range," as recited in claim 1.

Accordingly, because JP '065 does not disclose all of the features recited in claim 1, and in particular the specific control functions of claim 1, withdrawal of the rejection is respectfully requested.

Additionally, claims 4, 6-15 and 22 are also not disclosed by JP '065 for at least the dependence of these claims on independent claim 1, as well as for the separately patentable subject matter that each of these claims recite. Withdrawal of the rejection of these claims is respectfully requested.

Claims 3 and 5 are rejected under 35 U.S.C. §103(a) over JP 2002-164065 (JP '065) in view of JP 2003-178789 (JP '789). This rejection is respectfully traversed.

JP '789 fails to overcome the deficiencies of JP '065 with respect to claim 1. Thus, the combination cannot suggest the subject matter of claims 3 and 5, which depend from claim 1, for at least the reasons discussed above as well as for the additional features they recite. Accordingly, withdrawal of the rejection is respectfully requested.

#### **IV. Conclusion**

In view of at least the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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